City of Bolivar Annual AOC Report Summary

2011*											
Bypasses = 12			SSOs = 10 that re	eached Water	rs of U.S.	Total	SSOs = 13		NOV		
Date	Precip	Duration	Gallons	Date P	recip Dur	ration Ga	allons	Location			
2/14/2011	snow melt	3 days	9.8 MG	2/25/2011 1	39" 6 h	nours	81,000	J4-MH-120 near V	WWTP	March 2011 Ammonia and BOD	
3/2/2011	1.39"	6 days	18.5 MG	3/8/2011 1	32" 10	hours	78,000	J4-MH-120 near \	WWTP	June 2011 Ammonia and BOD	
3/8/2011	2"	10 days	28 MG	3/16/2011	- 45	min	200	G4-MH-005 S Mis	ssouri	May 2011 Ammonia	
3/19/2011	2.35"	4 days	11.3 MG	3/20/2011 1	74" 2 h	nours	7,200	J4-MH-090 near \	WWTP		
3/26/2011	0.95"	1 day	4.4 MG	3/20/2011 1	74" 2 h	nours	22,500	J4-MH-120 near V	WWTP		
4/21/2011	4.7"	9 days	35.3 MG	4/25/2011 1	.35" 18	hours	222,000	J4-MH-120 near \	WWTP		
5/12/2011	0.93"	0.5 days	99,000 gal	9/27/2011	- 2 h	nours	2,400	G5-MH-375 S Ma	in		
5/19/2011	1.3"	1 day	180,000 gal	10/7/2011	- 45	min	700	G5-MH-375 S Ma	in		
5/19/2011	3.8"	12 days	34 MG	12/20/2011 1	8" 4 h	nours	6,750	F5-MH-095 S Lillia	an		
8/8/2011	2.6"	1 day	3 MG	12/20/2011 1	8" 4 h	nours	6,750	F5-MH-090 S Lillia	an		
11/8/2011	2.5"	1 day	3 MG								
12/19/2011	1.8"	2 days	4.9 MG								
2010*											
Pypaccoc - 9	₊ 2			SSOc = 14 ± 2 +h	at reached W	lators of II S	Total	SSOc = 10 ± 2		NOV none	
Bypasses = 8		Duration	Gallons	SSOs = 14 + 2 th						NOV none	
Date	Precip	Duration	Gallons	Date P	recip Dur	ration Ga	allons	Location	ла 8. МО	Letter of Warning July 2010 Ammonia	
Date 1/21/2010	Precip 0.56"	1 day	2.8 MG	Date P	recip Dur	ration Ga min	allons 3000	Location G5-MH-085 Colle	•		
Date 1/21/2010 1/24/2010	Precip 0.56" 1.1"	1 day 2 days	2.8 MG 6.6 MG	Date P 1/20/2010 2/21/2010	recip Dur - 15 1.18 3 h	ration Ga min nours	3000 30,000	Location G5-MH-085 Colle J4-MH-120 near V	WWTP	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010	Precip 0.56" 1.1" 1.2"	1 day 2 days 2.5 days	2.8 MG 6.6 MG 8.1 MG	Date P 1/20/2010 2/21/2010 3/22/2010	recip Dur - 15 1.18 3 h 1.67 2 h	ration Ga min nours nours	3000 30,000 12,000	Location G5-MH-085 Colle J4-MH-120 near V J4-MH-120 near V	WWTP WWTP	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010	Precip 0.56" 1.1" 1.2" 3.04"	1 day 2 days 2.5 days 8 days	2.8 MG 6.6 MG 8.1 MG 27.6 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010	recip Dur - 15 1.18 3 h 1.67 2 h 1.11 7 h	ration Ga min nours nours	3000 30,000 12,000 63,000	Location G5-MH-085 Colle J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V	WWTP WWTP WWTP	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73"	1 day 2 days 2.5 days 8 days 6.5 days	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010	recip Dur - 1.18 3 h 1.67 2 h 1.11 7 h 1.24 45	ration Ga min nours nours nours min	3000 30,000 12,000 63,000 10,000	Location G5-MH-085 Colle J4-MH-120 near \ J4-MH-120 near \ J4-MH-120 near \ J4-MH-120 near \	WWTP WWTP WWTP WWTP	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71"	1 day 2 days 2.5 days 8 days 6.5 days 6 days	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010	recip Dur - 15 1.18 3 h 1.67 2 h 1.11 7 h 1.24 45 2.86 10	ration Ga min nours nours nours min hours	3000 30,000 12,000 63,000 10,000 60,000	Location G5-MH-085 Colle J4-MH-120 near \ J4-MH-120 near \ J4-MH-120 near \ J4-MH-120 near \ F5-025 W Broadw	WWTP WWTP WWTP way	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010 5/19/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71" 1.82"	1 day 2 days 2.5 days 8 days 6.5 days 6 days 4 days	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG 19.4 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010 5/14/2010	recip Dur - 15 1.18 3 h 1.67 2 h 1.11 7 h 1.24 45 2.86 10 2.86 5.2	ration Gamin hours hours min hours min hours 25 hours	3000 30,000 12,000 63,000 10,000 60,000 12,600	Location G5-MH-085 Colle J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V F5-025 W Broadw F5-040 W Broadw	WWTP WWTP WWTP WWTP vay	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010 5/19/2010 5/25/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71" 1.82" 1.5"	1 day 2 days 2.5 days 8 days 6.5 days 6 days 4 days 1 day	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG 19.4 MG 2.4 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010 5/14/2010 5/14/2010	recip Dur - 15 1.18 3 h 1.67 2 h 1.11 7 h 1.24 45 2.86 10 2.86 5.2 2.86 11	ration Gamin nours nours min hours 125 hours 15	3000 30,000 12,000 63,000 10,000 60,000 12,600 24,150	Location G5-MH-085 Colle J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V F5-025 W Broadw F5-040 W Broadw G4-005 S Missour	WWTP WWTP WWTP WWTP vay vay	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010 5/19/2010 5/25/2010 7/16/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71" 1.82" 1.5" 3.0"	1 day 2 days 2.5 days 8 days 6.5 days 6 days 4 days 1 day 13 hours	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG 19.4 MG 2.4 MG 2 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010	recip Dur - 15 1.18 3 hi 1.67 2 hi 1.11 7 hi 1.24 45 2.86 10 2.86 5.2 2.86 11	ration Gamin nours nours nours min hours 25 hours 75 hours 75 hours 75 hours	3000 30,000 12,000 63,000 10,000 60,000 12,600 24,150 13,125	Location G5-MH-085 Colle, J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V F5-025 W Broadw F5-040 W Broadw G4-005 S Missour J4-090 near WWT	WWTP WWTP WWTP WWTP vay vay ri	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010 5/19/2010 5/25/2010 7/16/2010 9/1/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71" 1.82" 1.5" 3.0" 4.8"	1 day 2 days 2.5 days 8 days 6.5 days 6 days 4 days 1 day 13 hours 1 day	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG 19.4 MG 2.4 MG 2 MG 4.0 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010	recip Dur - 1.18 3 hr 1.67 2 hr 1.11 7 hr 1.24 45 2.86 10 2.86 5.2 2.86 11. 2.86 8.7 2.86 22	ration Gamin hours hours hours hours hours hours hours hours 1.5 hours 1.5 hours 1.5 hours hours	3000 30,000 12,000 63,000 10,000 60,000 12,600 24,150 13,125 276,000	Location G5-MH-085 Colle J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V F5-025 W Broadw F5-040 W Broadw G4-005 S Missour J4-090 near WWT J4-120 near WWT	WWTP WWTP WWTP WWTP vay vay ri TP	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010 5/19/2010 5/25/2010 7/16/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71" 1.82" 1.5" 3.0" 4.8"	1 day 2 days 2.5 days 8 days 6.5 days 6 days 4 days 1 day 13 hours	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG 19.4 MG 2.4 MG 2 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/20/2010	recip Dur - 15 1.18 3 hi 1.67 2 hi 1.11 7 hi 1.24 45 2.86 10 2.86 5.2 2.86 11	ration Gamin nours nours nours min hours 25 hours .5 hours hours hours hours hours hours hours 6 hours	3000 30,000 12,000 63,000 10,000 60,000 12,600 24,150 13,125 276,000 1,800	Location G5-MH-085 Colle, J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V F5-025 W Broadw F5-040 W Broadw G4-005 S Missour J4-090 near WWT	WWTP WWTP WWTP WWTP vay ri IP	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010 5/19/2010 5/25/2010 7/16/2010 9/1/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71" 1.82" 1.5" 3.0" 4.8"	1 day 2 days 2.5 days 8 days 6.5 days 6 days 4 days 1 day 13 hours 1 day	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG 19.4 MG 2.4 MG 2 MG 4.0 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010	recip Dur - 15 1.18 3 h 1.67 2 h 1.11 7 h 1.24 45 2.86 10 2.86 5.2 2.86 11 2.86 8.7 2.86 22 1.82 1.5	ration Gamin hours hours hours 55 hours	3000 30,000 12,000 63,000 10,000 60,000 12,600 24,150 13,125 276,000 1,800 96,000	Location G5-MH-085 Colle J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V F5-025 W Broadw F5-040 W Broadw G4-005 S Missour J4-090 near WWT J4-120 near WWT G4-005 S Missour	WWTP WWTP WWTP way vay ri FP FF	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010 5/19/2010 5/25/2010 7/16/2010 9/1/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71" 1.82" 1.5" 3.0" 4.8"	1 day 2 days 2.5 days 8 days 6.5 days 6 days 4 days 1 day 13 hours 1 day	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG 19.4 MG 2.4 MG 2 MG 4.0 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/20/2010 5/21/2010	recip Dur - 15 1.18 3 hr 1.67 2 hr 1.11 7 hr 1.24 45 2.86 10 2.86 5.2 2.86 11 2.86 8.7 2.86 22 1.82 1.5 0.71 16 0.71 10	ration Gamin hours hours hours 55 hours	3000 30,000 12,000 63,000 10,000 60,000 12,600 24,150 13,125 276,000 1,800 96,000 18,000	Location G5-MH-085 Colle J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V F5-025 W Broadw F5-040 W Broadw G4-005 S Missour J4-090 near WWT J4-120 near WWT G4-005 S Missour J4-120 near WWT	WWTP WWTP WWTP way vay ri FP FF	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010 5/19/2010 5/25/2010 7/16/2010 9/1/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71" 1.82" 1.5" 3.0" 4.8"	1 day 2 days 2.5 days 8 days 6.5 days 6 days 4 days 1 day 13 hours 1 day	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG 19.4 MG 2.4 MG 2 MG 4.0 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/20/2010 5/21/2010 5/21/2010	recip Dur - 15 1.18 3 hr 1.67 2 hr 1.11 7 hr 1.24 45 2.86 10 2.86 5.2 2.86 11 2.86 8.7 2.86 22 1.82 1.5 0.71 16 0.71 10	ration Gamin hours hours hours 5 hours hours hours follows 5 hours	3000 30,000 12,000 63,000 10,000 60,000 12,600 24,150 13,125 276,000 1,800 96,000 18,000 15,000	Location G5-MH-085 Colle J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V J4-MH-120 near V F5-025 W Broadw F5-040 W Broadw G4-005 S Missour J4-090 near WWT J4-120 near WWT G4-005 S Missour J4-120 near WWT G4-005 S Missour	WWTP WWTP WWTP way vay ri rP ri	Letter of Warning July 2010 Ammonia	
Date 1/21/2010 1/24/2010 2/21/2010 3/20/2010 4/2/2010 5/13/2010 5/19/2010 5/25/2010 7/16/2010 9/1/2010	Precip 0.56" 1.1" 1.2" 3.04" 0.73" 4.71" 1.82" 1.5" 3.0" 4.8"	1 day 2 days 2.5 days 8 days 6.5 days 6 days 4 days 1 day 13 hours 1 day	2.8 MG 6.6 MG 8.1 MG 27.6 MG 13.8 MG 26 MG 19.4 MG 2.4 MG 2 MG 4.0 MG	Date P 1/20/2010 2/21/2010 3/22/2010 3/25/2010 5/13/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/14/2010 5/20/2010 5/21/2010 5/21/2010 6/4/2010	recip Dur - 15 1.18 3 hr 1.67 2 hr 1.11 7 hr 1.24 45 2.86 5.2 2.86 11 2.86 8.7 2.86 22 1.82 1.5 0.71 16 0.71 10	ration Gamin hours	3000 30,000 12,000 63,000 10,000 60,000 12,600 24,150 13,125 276,000 1,800 96,000 18,000 36,000	Location G5-MH-085 Colle J4-MH-120 near V F5-025 W Broadw F5-040 W Broadw G4-005 S Missour J4-090 near WWT J4-120 near WWT G4-005 S Missour J4-120 near WWT G4-005 S Missour J4-120 near WWT	WWTP WWTP WWTP way vay ri IP IF FF ri WWTP	Letter of Warning July 2010 Ammonia	

2009*

Bypasses = 4 + 6 (one miscount by City)							
Date	Precip	Duration	Gallons				
9/21/2009	2.6"	17.5 hours	3.3 MG				
10/8/2009	5"	4 days	16.7 MG				
10/30/2009	1.32"	3.5 days	12.8 MG				
11/15/2009	1.15"	1 day	2.1 MG				
2/11/2009	1.5"	10 hours	1.7 MG				
3/28/2009	1.25"	1 day	3.0 MG				
4/18/2009	1.56"	3 days	11.4 MG				
5/1/2009	3.3"	3.3 days	14.2 MG				
5/8/2009	2.9"	3 days	11.3 MG				
6/16/2009	2.29"	1 day	4.8 MG				

SSOs = 4 + 27	that reache	ed Waters of	U.S. Total	SSOs = 8 + 30
Date	Precip	Duration	Gallons	Location
10/8/2009	5"	27 hours	16,200	G4-MH-005 S Missouri
10/8/2009	5"	34 hours	3.5 MG	J4-MH-120 near WWTP
10/8/2009	5"	1 hour	20,000	J4-090 near WWTP
10/30/2009	1.32"	3 hours	27,000	J4-MH-120 near WWTP
1/9/2009		45 min	300	Lift Station 5
2/11/2009	1.5"	4 hours	60,000	J4-MH-120 near WWTP
3/28/2009	1.23"	2.5 hours	40,000	J4-MH-090 near WWTP
3/28/2009	1.23"	2.5 hours	40,000	J4-MH-120 near WWTP
4/19/2009	1.56"	5 hours	80,000	J4-MH-120 near WWTP
4/30/2009		.5 hours	50	429 S Springfield
5/1/2009	3.18"	12 hours	85,000	J4-MH-120 near WWTP
5/8/2009	2.9"	13 hours	100,000	J4-090 near WWTP
5/8/2009	2.9"	13 hours	100,000	J4-MH-120 near WWTP
5/8/2009	2.9"	30 hours	93,000	F5-95 S Lillian
5/8/2009	2.9"	8 hours	19,200	F5-040 W Broadway
5/8/2009	2.9"	8 hours	14,400	F5-010 W Broadway
5/8/2009	2.9"	1 hour	1,500	G5-175 S Albany
5/8/2009	2.9"	30 hours	55,800	F5-100 S Lillian
5/8/2009	2.9"	25 hours	15,000	F5-175 S Missouri
5/8/2009	2.9"	1 hour	10,000	Lift Station 2
5/8/2009	2.9"	15 min	300	Lift Station 3
6/10/2009	1.83"	10 hours	22,000	F5-MH-185 W Jefferson
6/10/2009	1.83"	10 hours	22,000	G4-MH-005 S Missouri
6/16/2009	2.29"	8 hours	130,000	J4-MH-120 near WWTP
6/16/2009	2.29"	2.5 hours	60,000	J4-MN-090 near WWTP
6/16/2009	2.29"	6 hours	3,600	G4-MH-005 S Missouri
6/16/2009	2.29"	7 hours	21,000	F5-MH-010 W Broadway

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Bypasses = 2 + 13			SSOs = 12 that reached Waters of U.S.			Vaters of U.S.	Total SSOs = 7 + 13			
	Date	Precip	Duration	Gallons	Date	Precip		Duration	Gallons	Location
	9/3/2008	3.11"	1.5 days	4.7 MG	3/18/200	8	4.3	33 hours	59,400	DF 1 S Missouri
	9/13/2008	3.8"	2 days	8.6 MG	4/10/200	8	3.2	4 hours	1,200	J4 S Albany
	1/8/2008	1.26"	1 day	4.1 MG	4/10/200	8	3.2	10 hours	5,000	DIB 2 W Jefferson
	2/11/2008	snow	1 day	2.0 MG	4/10/200	8	3.2	6 hours	13,000	I6 E Broadway
	2/16/2008	2.0"	3 days	11.1 MG	4/10/200)8	3.2	6 hours	13,000	I12 W Broadway
	3/3/2008	1.6"	3 days	12.2 MG	5/23/200)8		.5 hours	1,500	Lift Station 2
	3/18/2008	4.8"	6 days	24.1 MG	6/15/200)8		1.75 hours	500	Lift Station 2
	3/31/2008	5.5"	14 days	44.1 MG	7/9/200)8		1.5 hours	1,000	Lift Station 1
	4/24/2008	1.1"	4 days	8.2 MG	9/14/200)8	3.8	45 minutes	37,500	Lift Station 1
	5/7/2008	2.4"	3 days	12.6 MG	9/14/200)8	3.8	8 hours	1,500	DF1, I12, I13 Manholes
	5/15/2008	1.0"	13 hours	1.7 MG	10/30/200)8		10 minutes	500	Lift Station 1
	6/2/2008	3.6"	2 days	9 MG	12/3/200)8		1 hour	500	Lift Station 1
	6/9/2008	1.9"	2 days	8.1 MG						
	6/13/2008	1.0"	1 day	3.8 MG						
	6/28/2008	1.5"	1 days	4.6 MG						

NOV May 2008 Ammonia and BOD NOV June 2008 Ammonia and BOD LOW March 2008 BOD NOV April 2008 Ammonia and BOD

Identified 90 I&I problems and 45 repaired but no indication how they were repaired. No information on any re-lining or replacement of sewer lines in 2011. No information on any manhole rehab or repairs in 2011.

Notes that manhole rehab and lining planned in south collection basin in 2012 but no idea of what or when. Notes that capacity study on another collection basin is planned for 2012 but no idea of where or what basin.

It appears that City of Bolivar is not as far along in its progress to stop I&I as previous reports had indicated.

Capacity analysis on significant mains was due 12/31/11. It was not included with annual report. Why?